

Sonnenschein

SONNENSCHN NATH & ROSENTHAL

One Metropolitan Square
Suite 3000

St. Louis, MO 63102 *Chicago*

314.241.1800 *Kansas City*

314.259.5959 fax *Los Angeles*

www.sonnenschein.com *New York*

San Francisco

St. Louis

Washington, D.C.

West Palm Beach

Facsimile Transmittal Sheet

DATE• September 2, 2004

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME• Eva James/Certificates of Correction Branch

FAX• 703-746-4630

CLIENT/MATTER• 60019620.0003

FROM• Tara Nealey

TIME SENT

TOTAL NUMBER OF PAGES TRANSMITTED, INCLUDING THIS SHEET: 11

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.


Jodi A. Gallop

September 2, 2004

Date

Type of Paper transmitted: Correction Documents

Applicant's Name: Deuel, Thomas F., et al.

Patent No.: 6,448,381

Examiner: Unknown

Patent Issued: September 10, 2002

Art Unit:

Application Title: DNA ENCODING HEPARIN-BINDING GROWTH FACTOR

Original will NOT be mailed

CONFIDENTIALITY NOTE

The documents accompanying this facsimile transmission and the Facsimile Transmission Sheet contain information from the law firm of Sonnenschein Nath & Rosenthal which is confidential or privileged. The information is intended to be for the use of the individual or entity named on this transmission sheet. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this facsimile information is prohibited. If you have received this facsimile in error, please notify us by telephone immediately so that we can arrange for the retrieval of the original documents at no cost to you.

IF YOU DO NOT RECEIVE ALL OF THE PAGES ABOVE, PLEASE CALL 314.241.1800 AS SOON AS POSSIBLE.

SN&R FACSIMILE DEPARTMENT USE ONLY:

TRANSMISSION COMPLETED AT:

DOCUMENT TRANSMITTED BY:

CERTIFICATE OF CORRECTION

PATENT NO. : 6,448,381 B1
DATED : September 10, 2002
INVENTOR(S) : Deuel, Thomas, F. et al.

Page 1 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

Item [54], Title should be replaced with -- DNA ENCODING HEPARIN BINDING GROWTH FACTORS. --

Column 1.

Line 55, delete "." which appears after ";" and before "Zhan."

Column 5.

Line 9, nucleotide 314, should be changed from "d" to -- G. --

Line 62, "the extra space which appears after "ity" should be removed.

Column 10.

Line 6, add -- . -- between "7.0" and "About."

Table II, "HBGF8" should be replaced with -- 95% GLY-LYS-LYS-GLU-LYS-PRO-GLU-LYS-LYS-VAL-LYS-LYS-SER-ASP-CYS-GLY-GLU-TRP-GLN-TRP-SER-VAL-CYS-VAL-PRO. --

Line 57, add a space after "5299" and before "(1979)".

Column 12.

Line 50, the sequence of claim 2 should read:

GTCAAAGGCA	GGATCAGGTT	CCCCGCCTCC	CAGTCCAAAA	ATCCCGCCAA	50
GAGAGCCCCA	GAGCAGAGGA	AAATCCAAAG	TGGAGAGAGG	GGAAGAAAGA	100
GACCAAGTGAG	TCATCCGTCC	AGAAGGCGGG	GAGAGCAGCA	GCGGCCCAAG	150
CAGGAGCTGC	AGCGAGCCGG	GTACCTGGAC	TCAGCGGTAG	CAACCTCGCC	200
CCTTGCAACA	AAGGCAGACT	GAGCGCCAGA	GAGGACGTTT	CCAACTCAAA	250
AATGCAGGCT	CAACAGTACC	AGCAGCAGCG	TCGAAAATTT	GCAGCTGCCT	300
TCTTGGCATT	CATTTTCATA	CTGGCAGCTG	TGGATACTGC	TGAAGCAGGG	350
AAGAAAGAGA	AACCAGAAAA	AAAAGTGAAG	AAGTCTGACT	GTGGAGAATG	400
GCAGTGGAGT	GTGTGTGTGC	CCACCAAGTG	AGACTGTGGG	CTGGGCACAC	450
GGGAGGGCAC	TCGGACTGGA	GCTGAGTCCA	AGCAAACCAT	GAAGACCCAG	500

CERTIFICATE OF CORRECTION

PATENT NO. : 6,448,381 B1
DATED : September 10, 2002
INVENTOR(S) : Deuel, Thomas, F. et al.

Page 2 of 2

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 12 (cont'd).

AGATGTAAGA TCCCCTGCAA CTGGAAGAAG CAATTTGGCG CGGAGTGCAA	550
ATACCAGTTC CAGGCCTGGG GAGAATGTGA CCTGAACACA GCCCTGAAGA	600
CCAGAACTGG AAGTCTGAAG CGAGCCCTGC ACAATGCCGA ATGCCAGAAG	650
ACTGTCACCA CTCCCAAGCC CTGTGGCAAA CTGACCAAGC CCAAACCTCA	700
AGCAGAATCT AAGAAGAAGA AAAAGGAAGG CAAGAAACAG GAGAAGATGC	750
TGGATTAAAA GATGTCACCT GTGGAACATA AAAAGGACAT CAGCAAACAG	800
GATCAGTTAA CTATTGCATT TATATGTACC GTAGGCTTTG TATTCAAAAA	850
TTATCTATAG CTAAGTACAC AATAAGCAAA AACAAAAAGA AAAAAAAAAA	900
AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA	950
AAAAAAAAAA A	961

Signed and Sealed this

Fifteenth Day of June, 2004



JON W. DUDAS

Acting Director of the United States Patent and Trademark Office



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

Date Mailed : 5-27-04

W 6-14-04

Patent No.: 6,448,381

Patent Issued : September 10, 2002

Inventor(s) : Thomas F. Deuel, et. al.

Title : DNA ENCODING HEPARIN-BINDING GROWTH FACTOR

Docket No.: 60019620-0003

MTM

CC: GHB

Re: Request for Certificate of Correction

Consideration has been given your request for the issuance of a certificate of correction for the above-identified patent under the provisions of Rule 1.323.

The alleged errors to column 12 should not be made or adding of claims 3 or 4.

In view of the foregoing, your request in this matter is hereby denied. However, further consideration will be given upon receipt of a request for reconsideration directed to Decisions & Certificates of Correction Branch.

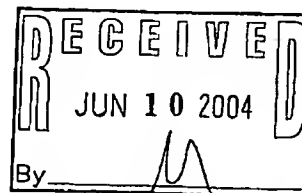
A certificate of correction will issue to correct the remaining errors noted in your request.

Eva James
For Cecelia B. Newman
Certificates of Correction Branch
(703) 305-8047 or 8309

Michael T. Marrah
Sonnenschein Nath & Rosenthal
P.O. Box #061080
Wacjer Drive Station
Sears Tower
Chicago, Illinois 60606-1080

ej

RECEIVED biobay DOCKET
DOCKETED C.O.C. Demo
DIARIED 6/10/04
BY: SM



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: DEUEL, Thomas, F. et al. Examiner: EYLER, Yvonne, L.

Patent No.: 6,448,381

Group Art Unit: 1646

Issued: September 10, 2002

For: DNA ENCODING HEPARIN BINDING
GROWTH FACTORS

Attorney Docket: 60019620-0003

Commissioner for Patents
Attn: Decisions & Certificate of Correction Branch
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION

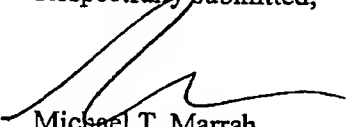
Sir:

Transmitted herewith is a proposed Certificate of Correction for the above-captioned Letters Patent.

This application was filed on June 21, 1990, with 7 claims. Amendment A filed on August 19, 1991, withdrew claims 1-3 and amended claims 4-7. The Examiner's Amendment mailed September 28, 1995, canceled claims 1-3 and amended claims 4 and 6. Accordingly, Patentee respectfully requests that a Certificate of Correction be issued to reflect that U.S. Patent No. 6,448,381 consists of 4 claims (i.e., original claims 4-7).

Patentee submits that the errors set forth in the proposed Certificate of Correction were made by the Patent and Trademark Office and no fee is due.

Respectfully submitted,


Michael T. Marrah
Reg. No. 40,718
Customer No. 26263
(314) 259-5303

Direct telephone calls to:
231426631V-1

PTO/SB/44 (02-01)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,448,381

DATED : September 10, 2002

INVENTOR(S) : DEUEL, Thomas, F. et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

The title should be replaced with "DNA ENCODING HEPARIN BINDING GROWTH FACTORS."

In Column 1, line 55, delete "." which appears after ";" and before "Zhan."

In Column 5, nucleotide 314 should be changed from "d" to "G."

In Column 5, line 62, the extra space which appears after "ity" should be removed.

In Column 10, line 6, add "." between "7.0" and "About."

In Table II, HBGF8 should be replaced with "95% GLY-LYS-LYS-GLU-LYS-PRO-GLU-LYS-LYS-VAL-LYS-LYS-SER-ASP-CYS-GLY-GLU-TRP-GLN-TRP-SER-VAL-CYS-VAL-PRO."

In Column 10, line 57, add a space after "5299" and before "(1979)."

In Column 12, line 23, replace "Thr" with "Ala"; replace "Pro" with "Gln"; and replace "Leu" with "Gln."

In Column 12, line 41, replace "Asp" with "Glu."

In Column 12, line 43, replace second "Ser" with "Pro."

In Column 12, line 48, add "purified and isolated" before "cDNA" and after "The" and replace "bovine" with "human."

MAILING ADDRESS OF SENDER: SONNENSCHN NATH & ROSENTHAL
PO Box #061080, Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080

PATENT NO. 6,448,381

No. of additional copies



Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/44 (02-01)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,448,381

DATED : September 10, 2002

INVENTOR(S) : DEUEL, Thomas, F. et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

The sequence of Claim 2 should read:

GTCAAAGGCA	GGATCAGGTT	CCCCGCCTCC	CAGTCCAAAA	ATCCCGCCAA	50
GAGAGCCCCA	GAGCAGAGGA	AAATCCAAAG	TGGAGAGAGG	GGAAGAAAGA	100
GACCAAGTGAG	TCATCCGTCC	AGAAGGCGGG	GAGAGCAGCA	GCGGCCCAAG	150
CAGGAGCTGC	AGCGAGCCGG	GTACCTGGAC	TCAGCGGTAG	CAACCTCGCC	200
CCTTGCAACA	AAGGCAGACT	GAGCGCCAGA	GAGGACGTTT	CCAACTCAA	250
AATGCAGGCT	CAACAGTACC	AGCAGCAGCG	TCGAAAATTT	GCAGCTGCCT	300
TCTTGGCATT	CATTTTCATA	CTGGCAGCTG	TGGATACTGC	TGAAGCAGGG	350
AAGAAAGAGA	AACCAGAAAA	AAAAGTGAAG	AAGTCTGACT	GTGGAGAATG	400
GCAGTGGAGT	GTGTGTGTGC	CCACCAAGTG	AGACTGTGGG	CTGGGCACAC	450
GGGAGGGCAC	TCGGACTGGA	GCTGAGTCCA	AGCAAACCAT	GAAGACCCAG	500

MAILING ADDRESS OF SENDER:

SONNENSCHN NATH & ROSENTHAL
PO Box #061080, Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080PATENT NO. 6,448,381

No. of additional copies



Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/44 (02-01)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,448,381

DATED : September 10, 2002

INVENTOR(S) : DEUEL, Thomas, F. et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

AGATGTAAGA TCCCCTGCAA CTGGAAGAAG CAATTTGGCG CGGAGTGCAA	550
ATACCAGTTC CAGGCCTGGG GAGAATGTGA CCTGAACACA GCCCTGAAGA	600
CCAGAACTGG AAGTCTGAAG CGAGCCCTGC ACAATGCCGA ATGCCAGAAG	650
ACTGTCACCA CTCCAAGCC CTGTGGCAAA CTGACCAAGC CCAAACCTCA	700
AGCAGAATCT AAGAAGAAGA AAAAGGAAGG CAAGAAACAG GAGAAGATGC	750
TGGATTAAAA GATGTCACCT GTGGAACATA AAAAGGACAT CAGCAAACAG	800
GATCAGTTAA CTATTGCATT TATATGTACC GTAGGCTTTG TATTCAAAAA	850
TTATCTATAG CTAAGTACAC AATAAGCAAA AACAAAAAGA AAAAAAAAAA	900
AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA	950
AAAAAAAAAA A	961

MAILING ADDRESS OF SENDER:

SONNENSCHN NATH & ROSENTHAL
PO Box #061080, Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080

PATENT NO. 6,448,381

No. of additional copies



Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/44 (02-01)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,448,381

DATED : September 10, 2002

INVENTOR(S) : DEUEL, Thomas, F. et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Add Claim 3 as follows:

3. A purified and isolated DNA sequence consisting of a sequence encoding bovine heparin binding growth factor of 168 amino acids having the following amino acid sequence:

Met Gln Thr Pro Gln Tyr Leu Gln Gln Arg Arg Lys Phe Ala Ala	15
Ala Phe Leu Ala Phe Ile Phe Ile Leu Ala Ala Val Asp Thr Ala	30
Glu Ala Gly Lys Lys Glu Lys Pro Glu Lys Lys Val Lys Lys Ser	45
Asp Cys Gly Glu Trp Gln Trp Ser Val Cys Val Pro Thr Ser Gly	60
Asp Cys Gly Leu Gly Thr Arg Glu Gly Thr Arg Thr Gly Ala Glu	75
Cys Lys Gln Thr Met Lys Thr Gln Arg Cys Lys Ile Pro Cys Asn	90
Trp Lys Lys Gln Phe Gly Ala Glu Cys Lys Tyr Gln Phe Gln Ala	105
Trp Gly Glu Cys Asp Leu Asn Thr Ala Leu Lys Thr Arg Thr Gly	120
Ser Leu Lys Arg Ala Leu His Asn Ala Asp Cys Gln Lys Thr Val	135
Thr Ile Ser Lys Pro Cys Gly Lys Leu Thr Lys Ser Lys Pro Gln	150
Ala Glu Ser Lys Lys Lys Lys Lys Glu Gly Lys Lys Gln Glu Lys	165
Met Leu Asp	168

PATENT NO. 6,448,381

MAILING ADDRESS OF SENDER: SONNENSCHN NATH & ROSENTHAL
PO Box #061080, Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080

 No. of additional copies

Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,448,381

DATED : September 10, 2002

INVENTOR(S) : DEUEL, Thomas, F. et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Add Claim 4 as follows:

4. The purified and isolated cDNA of bovine heparin-binding growth factor having the following nucleotide sequence:

GAGTGGAGAG	AGTAGAAGAA	AGAGAGCAGG	GAGTCACCGG	GCGTGCGGGG	50
GCGGAGAGCA	GCGGCCGCCG	CGAGCACCAG	CGACTTGGGT	ACCTGGACTC	100
AGGGCAGAAA	AACCTCTCCC	GGATCAACAA	AGGCAGCCTG	AGCGCGCACC	150
GCTCTTTTGC	GACTCCAAAA	TGCAGACTCC	ACAGTACCTG	CAGCAACGTC	200
GAAAATTTGC	AGCTGCCTTT	TTGGCATTTA	TTTTCATCTT	GGCAGCTGTG	250
GACAACGCTG	AAGCAGGAAA	GAAAGAGAAA	CCAGAAAAGA	AGGTGAAGAA	300
GTCTGACTGT	GGAGAATGGC	AGTGGAGTGT	GTGTGTACCA	ACCACTGGGG	350
ACTGTGGGCT	GGGCACCCGC	GAGGGCACCC	GTACCGGAGC	TGAGTGTAAG	400
CAAAACATGA	AGACCCAGAG	ATGTAAGATC	CCCTGCAACT	GGAAAAAGCA	450
ATTGAGGCG	GAGTGCAAAT	ACCAGTTCCA	GGCCTGGGGA	GAATGTGATC	500
TGAACACGGC	TCTGAAGACC	CGAACTGGGA	GCCTGAAGCG	AGCCCTCCAC	550
AACGCCGACT	GCCAGAAGAC	AGTCACCATC	TCCAAGCCCT	GTGGCAAGCT	600
GACCAAGTCC	AAACCTCAAG	CAGAATCTAA	GAAGAAGAAA	AAGGAAGGCA	650

PATENT NO. 6,448,381

MAILING ADDRESS OF SENDER:

SONNENSCHN NATH & ROSENTHAL
PO Box #051080, Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080

No. of additional copies

Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PTO/SB/44 (02-01)

Approved for use through 01/31/2004. OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : 6,448,381

DATED : September 10, 2002

INVENTOR(S) : DEUEL, Thomas, F. et al.

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

AGAAACAGGA	GAAGATGCTG	GACTAAAAGC	CACCACCTTC	CGTGGACCAT	700
GAAAAGGACA	TCAGCAAACA	CGATCAGTTA	ACTATTGCAT	TTATATCTAC	750
CGTAGGCTTT	TTATTCAAAA	ATTATCTATA	GCTTAAGTAC	ACAATAGGCA	800
GAAACAAAAT	GAAAAGAAAA	ATTTTGTAGT	AGCATTTTTT	TTAAATGTAT	850
CAATATACCA	TAGTACCACT	AGGGACTTAT	AATAGAGGAC	TGTAATCCTA	900
TTTAGAATGT	TGACTTATAG	TACATGTTAA	GTGATAGAAA	ACTGAGGTAA	950
GTTTTTTGAA	GTTATGTGAT	ATTTTACATT	ACATTTTTTT	TTACATTTTT	1000
TTCTTTTGGC	AGCAATTTAA	ATGTTATGAC	TATGTAAACT	ACTTCTCTTG	1050
TTAGGTAATT	TTTTTCACCT	AGACTTTATT	TCCAATTGA	GAAAAATATC	1100
TACTAAACAA	AGCAGCAATA	AAATATGATC	ATCCTATCTG	AGGAAAATAT	1150
CTCTTTTCT	GCCAGTGGAT	TTTTAAAAAA	TTGTAGTCAA	CAAAAT	1196

MAILING ADDRESS OF SENDER:

SONNENSCHN NATH & ROSENTHAL
PO Box #061080, Wacker Drive Station-Sears Tower
Chicago, Illinois 60606-1080

PATENT NO. 6,448,381

No. of additional copies



Burden Hour Statement: This form is estimated to take 1.0 hour to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.